

W. H. Taylor M.D. F.R.C.S. Etc.
(2.) my kind mother

CLINICAL STUDY,

ITS MEANS AND METHOD:

A Lecture

DELIVERED IN THE THEATRE OF THE CITY OF DUBLIN
HOSPITAL, NOVEMBER 6TH, 1862,

BY

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“ *Licet omnibus, licet etiam mihi, dignitatem artis medico*rum**
tueri.”—CICERO.

CLINICAL STUDY, ITS MEANS AND METHODS.

ASSEMBLED as we are, for the first time, in our new and commodious Theatre, to commence the annual course of clinical instruction—before proceeding to our immediate business, I feel it to be a primary duty to acknowledge, on behalf of my colleagues and myself, the obligations under which the Institution has been placed by our tried and liberal benefactor, Mr. HARVEY. The munificent gift of £500 which he has presented towards the improvement of the Hospital, and which the Directors, in the exercise of the discretion accorded to them, have expended on the much-needed building in which we meet, adds still another claim on the gratitude of all who feel interested in the welfare of the institution. The Directors have long since expressed their cordial thanks for the continued and practical interest which Mr. HARVEY manifests towards the charity; the present, however, is the first opportunity which the medical officers have enjoyed of tendering, in their collective capacity, their tribute of gratitude for benefits of which, as the more immediate administrators of his bounty, *they* should feel most deeply sensible. We cannot, therefore,

allow the present occasion to pass without recording our sentiments on the subject. In this spacious and well-lighted apartment, the operations of surgery will be conducted to the greatest advantage, as respects both the patient, the surgeon, and the students. Here the pupils assembled to learn the results of our clinical experience, will do so, we trust, with augmented zeal, and with greater comfort and convenience to themselves. Here also, I will venture to add, they will meet instructors as earnest as ever in their service.

The City of Dublin Hospital has been in existence for thirty years, and though not sustained by the fostering hand of Government patronage, has shown an inherent and ever-increasing vitality. It has attained success, I make bold to say, for the most desirable of all reasons —because *it has sought to deserve it*; because its managers, ever anxious to apply the resources of modern progress in promoting the welfare, and in augmenting the comforts of the sick, have fulfilled their mission with undeviating constancy of purpose. Notwithstanding occasional seasons of financial pressure, to which all institutions relying on voluntary support are of necessity subject, a charity based on such principles of action need entertain no fears for the future.

But I approach, with mingled feelings, another subject. A warm, a generous, and a constant patron of the hospital has lately passed from amongst us—one whose services and whose purse were ever at the disposal of the needy and the sufferer. True to his generous instincts, Mr. DRUMMOND, a citi-

zen of known and honorable standing, has nobly bequeathed the sum of one thousand pounds for the enlargement of the hospital, thus helping to release the Directors from an ever-pressing difficulty—that of providing accommodation for the constantly-increasing crowd of applicants. Such earnest men infuse life and vigour into the benevolence of others ; and difficult would it be to estimate the benefit of their example. These are they, who are not content to tell their suffering brethren, “Be ye warmed and filled” (aye, and be ye healed), “ notwithstanding that they give them not the things which are needful for the body ;” no—such men endorse their convictions by their acts.

It is confidently expected that the plans and arrangements of the Board will, ere long, be sufficiently matured to enable them to carry into active operation the benevolent intentions of the founder. In discharging this duty, they must, of necessity, rely on public liberality for the future endowment or support of this much-needed extension of the hospital.

The functions of the medical officers of a large hospital assume a two-fold character : the one is expressive of their mission as regards the sick—a mission at once honorable and responsible; the other, no less so, points to their duty of communicating to the student the fruits of their more mature experience and observation—of communicating to him the knowledge of that noble art, which, we trust, he is destined to exercise hereafter, alike for the benefit of society and for his own reputation and support. In discharging the duty of clinical teacher, the latter is obliged, of course, to dwell on many topics with which he has been long

familiar, for the benefit of those to whom they still are new. So far, however, from viewing this as an irksome duty, he should feel that in describing to others the phenomena of disease, he does that which demands a habit of accurate observation on his own part ; he is led to realize and examine more thoroughly his own experience, and thus gains order, precision, and self-reliance in his proceedings. Whilst, then, gentlemen, we undertake to instruct you, we feel that we ourselves must continue students to the end of our lives. We feel, to use the glowing language of Lord MACAULAY, when speaking of BACON'S inductive method, that ours " is a philosophy which never rests—which has never attained it, which is never perfect. Its law is progress. A point which was yesterday invisible, is its goal to-day, and will be its starting-point to-morrow."

The delivery of discourses preliminary to the various branches of medical study, is a time-honored custom ; indeed, if I am not mistaken, the learned will have it to date backwards to the age of GALEN. Leaving this question to the solution of the curious, it seems however obvious, that the student, taking his place for the first time on the benches of the lecture-room—having necessarily ill-defined notions of the science—bewildered, perhaps, by the number and variety of the subjects which appear in the medical programme, and by the reputed difficulties of the career on which he is about to enter—young and inexperienced in the world—must need some words of encouragement, explanation and advice. Gentlemen, the stern order of rotation constrains me to undertake this task. I can, with the utmost sincerity, assure you, that I feel most sensibly

the delicacy and responsibility of my position, and that the duty thus devolved upon me requires for its due discharge no ordinary tact and judgment. I must take leave to add, that in this mixed assembly, there are many of less junior standing, who have listened during past years to the able and comprehensive addresses of those veterans of our art, with whom I have the honor to serve, and each of whom is well entitled to adopt the language of CICERO, when he says, "*Potestas modo, veniendi in publicum sit, dicendi periculum non recuso.*" I know, however, by experience, that the large and varied field of observation which our hospital affords, yearly attracts a fresh accession of students, and that in addressing them, and also those who are still on the threshold of our profession, I shall perform, however inadequately, a function which is not superfluous. In doing so, I lay claim to nothing further than to offer to both, such general counsels and reflections as some experience, and a hearty desire to be of service, shall enable me.

On the present occasion, then, as on former ones, we see around us a variety of faces—some long familiar, and many new. We observe the senior students, whose zealous attendance in our wards we have viewed with genuine satisfaction, and as a happy augury of future success. We trust that they return on completing their autumnal holiday, with renewed health and vigour to prosecute their labours with increasing earnestness. Gentlemen, we greet you with kindly recognition and with good will: we hail you as fellow-labourers in the field; for I have already told you

that we, too, are but students, though, of course, in the senior class.

It is said that the great JOHN HUNTER, on entering the theatre of one of the London hospitals, whilst beholding the crowd of junior pupils, and touched by the thought of the great struggle before them, forgetful of everything else, lifted up his hands, and exclaimed with tearful eyes, “God help you, gentlemen ; what will become of you all ?”

I feel no disposition to underrate the difficulties of your present or your after-life, or to conceal from you the arduous nature of the duties which you have voluntarily undertaken. I cannot, however, make the exclamation of the great philosopher my own. I confess I rather view it as an index of that humility which ever attends transcendent genius, and which led him for the moment to forget, that even a tithe of the ardour which fired his breast, would have enabled the most junior of his auditors to achieve future competence and distinction.

To my younger hearers, then, I will at once say, I heartily congratulate you on your choice of a profession.

A modern writer of note, MR. RUSKIN, remarks, that there are five great intellectual callings which minister to the daily wants of life, and which have existed in every civilized nation :—“The soldier’s profession is—to defend it ; the pastor’s—to teach it ; the lawyer’s—to enforce justice in it ; the physician’s—to keep it in health ; and the merchant’s—to provide for it.” Need I say that the last-named but one, is surely not the least important.

The true aim of Medicine is the study of life and its

imperfections, with the object of lengthening and sustaining the one, and reducing the other to a minimum. But it is not alone with life and death we have to deal. There are many physical and moral ills which, though they do not threaten life, are sufficient to mar its enjoyment. To the palliation or removal of these our art is ever tending. I therefore tell you boldly, you have chosen a noble calling, one which, exercised in a conscientious and enlightened spirit, may stand comparison with any other, I care not which. Let us set out, therefore, at unity on this point. Let us say, with the great Roman orator whom I have already quoted, "*Licet omnibus, licet etiam mihi, dignitatem artis medicæ tueri.*"

So far, then, from sanctioning your entertaining feelings of hesitation or distrust at the prospect before you, we hold out to you the right-hand of encouragement and sympathy. If your object, indeed, in this life be solely to make money—to become rich—a shorter road to what some call fortune, might be sought elsewhere; but with knowledge and good conduct you may reasonably count on that moderate competence which Solomon tells us was the subject of Agur's aspirations. In the present day, moreover, the lot of the most ill-requited portion of our brethren has been amended, and we may hope that ere long the saying of Sir WALTER SCOTT, that "the country doctor was the worst paid and worst cared-for animal in existence, except his horse," will be an untenable doctrine either in North Britain or elsewhere.

In the further observations I shall have to offer, I

shall assume then, that you have adopted your profession of your own free will, and that you possess at least some general notions of its relative position, dignity, and importance, even if you have not yet learned the truth of the doctrine which HOMER puts into the mouth of NESTOR, that the medical practitioner is worth a host of ordinary men,—“Πολλων ανταξιος αλλασσει.”

At the outset of your professional career, each of you will probably ask yourselves the question—does my previous education fit me for embarking with success in the medical calling? I will answer the question for you, though somewhat indirectly, by telling you that, although all may not be quite indispensable, still there are few branches of knowledge which may not be cultivated with advantage by those who are about to enter our ranks. How, for instance, can you expect to comprehend the functions, diseases, and injuries of the organs of locomotion and of vision, without an acquaintance with the elements of mechanics and of optics? If you are ignorant of the phenomena of the intellect, and of the affective faculties in their healthy state, how can you presume hereafter to undertake the treatment of the insane, or to offer opinions before a public tribunal in a case of presumed unsoundness of mind? I must also strongly insist on the importance of the study of *mathematics*, not alone as an element of a liberal education, but also as an important discipline of the mind—an exercise of those faculties of reasoning, attention, and comparison, which are so necessary to the medical student. Mathematics,

moreover, are essential to the study of physics. Physics, in their turn, include the important subjects of heat, electricity, magnetism, and so forth. The practical bearing of these branches of knowledge is rendered daily more apparent. They elucidate several important questions in practical physiology, and are indispensable to the scientific inquiries which officers in the medical department of the public service are expected to be competent to undertake. Observations in meteorology and climatology are of this nature. To be versed in these matters may also promote your pecuniary interests ; and I mention it for your encouragement, that a countryman of our own,—a true Milesian,—Dr. Sir WILLIAM O'SHAUGHNESSY, now holds, as I am informed, a high and profitable position as Superintendent of the Indian Telegraph System—a position conferred upon him in consequence of his known familiarity with the subjects to which I have just alluded.

That it behoves you to be reasonably versed in the Greek and Latin languages requires but a passing comment. Putting the matter on the lowest ground, you must remember that your prescriptions will be written in Latin, and that you should not willingly incur the ill-suppressed ridicule that awaits you, should you be caught—*flagrante delicto*—in the act of issuing an ungrammatical prescription. Still less should you be content to be ignorant of tongues which are interwoven with the literature of all civilized countries, in which were expressed the profound thoughts and happy maxims of nations whose laws

and usages have left their impress on every department of society—nations, the descendants of which, at the present moment, engage the attention of all Europe. Were I to revert to the less cogent motive, I should also remind you that much more strictness in the examination on these subjects is now observed by the Navy and other boards. One of the best treatises ever produced on anatomy, that of SOEMMERING—“*de corporis humani fabrica*”—is in the Latin language, in which also MORGAGNI, SCARPA, ZINN, and HALLER expressed the results of their noble labours.

Your knowledge of English composition and your orthography, will be tested by your answers to written questions. I was much struck by a fact, stated in an admirable discourse delivered in this hospital by Dr. BENSON, that he had known a practitioner to have lost the confidence of his patient simply by an orthographic blunder. No doubt the doctor's patron argued, “*ex pede Herculem*,” and began to suspect that his friend's *advice* must be as bad as his *spelling*—and, after all, this was a natural inference.

It should be matter of congratulation to us as Irishmen, that amidst the discreditable apathy that has too long reigned amongst the medical corporations of these kingdoms on the subject of preliminary education, (an apathy of which a fresh outbreak has lately shown itself on the other side of St. George's Channel), the Royal College of Surgeons of Ireland should have been ever the foremost advocate of progress.

You must not, Gentlemen, imagine that I assert

that, ere crossing the threshold of medicine, you must be profoundly versed in the just named and other general studies, however desirable such proficiency ; but, unquestionably, your profession has a right to expect it of you, and you owe it to your own character, that you should be well-informed members of general society, in which, of course, you expect to be received, not only as members of a learned profession, but as well-educated gentlemen ; but for this purpose you must be fitted to associate with them, and this you cannot hope to be if ignorant of the ordinary topics of conversation amongst them. Society does not trouble itself about the class-distinctions which are necessary amongst ourselves. Men of information and good character will be quite as well received, no matter to what grade they belong.

Should any of those I address be, unfortunately, ill-grounded in the subjects on which I have thought it my duty to comment, much may be done to remedy the evil, by moderate but resolute attention to them in your hours of relaxation—relaxation, not to be secured by mere mental inaction, but often as much so by changing the object of your study ; for you know that

“ Absence of occupation is not rest ;
A mind quite vacant is a mind distress'd.”

In taking leave of these topics, I scarcely think it necessary to impress on you the value of the French and German languages, particularly the latter, in which are contained some of the most complete and

valuable works on surgery, morbid anatomy, chemistry, and forensic medicine. In all of these, moreover, you will observe that acquaintance with the labours of British physicians and surgeons, the absence of which is so remarkable in most of the productions of the Parisian school.

Depend upon it that, daily, you will be more and more convinced of the great moment of laying a *broad basis of general knowledge*. Let no one betray you into the absurd belief that the cultivation of medicine, on the one hand, and of literature and science, on the other, are incompatibilities. Not to mention the ancient worthies, remember a name, even now famous throughout the world—the Irishman, ROBERT GRAVES,—this profound physician, was a brilliant scholar and man of science.

The education of the practitioner, for whatever branch of the profession he is destined, embraces a variety of medical subjects; and as the arrangements of the various governing bodies allow of its completion in the brief space of three years, it is of the greatest moment to you, not alone for present convenience, but for your future success—indeed, I might say, your future happiness in life—that your attention should not be over-taxed at any particular period. In our profession, alas! as in every other, we meet those fickle spirits who, towards the close of their career as students, seek to atone for misspent time by inordinate efforts. Such persons may, and often do succeed in passing their examinations, blindly forgetting that this achievement is no augury of that future

success which, it may be presumed, is their ultimate object. Habits of attention, once lost, are not easily regained ; and no lasting impressions are made on a mind which is exercised beyond its powers. Let me, then, warn you, my younger friends, against this common, but most pernicious error. Let me beg of you to distribute an uniform, and not undue exertion over the whole period of your curriculum.

Medicine presents itself to our consideration both as a science, and also as an art, or application of knowledge to a particular end. In the former aspect, we find it studying life and organisation both in its standard and deranged conditions, and deriving its resources from a variety of quarters. Regarded as an art, medicine is concerned either in the function of assisting to construct and administer the laws and in promoting public health, or in discharging the equally important duty of curing or alleviating disease. With the former we are not just now concerned. The student should ever remember that he is not engaged in the study of an abstract science, but of a practical art, and that, to insure success, he must provide himself with means suitable to the end in view ; in a word, he must bring numerous departments of knowledge, both technical and general, as instruments to the study of disease. The general departments have already briefly engaged our attention. "In the practice of our art as respects individuals, we undertake to cure disease ; and in saying that we are to use our best efforts honestly and conscientiously to fulfil that end, we have given you a

summary of our duties. But for the cure of disease, it is not sufficient that you should understand the nature and application of remedies. Disease is a disturbance of one or more of the animal functions, in many cases attended by an alteration of the structures ; hence, if you would understand these deviations, you must first make yourself acquainted with these structures and functions in their normal state." This leads you at once to perceive that the course of practical education in which you must engage, arranges itself under the respective heads of *anatomy* and *physiology*, *pathology*, and *therapeutics*. Remember that the latter—or the *science of treatment*—is the end to which all your efforts must converge.

The abstract study of anatomy or pathology is, no doubt, fraught with the deepest interest, and possibly some few may look forward to become endowed professors of these subjects ; but if you aim to become practitioners, you must estimate the value of this and other knowledge by the degree in which they conduce to instruct you in *curing the maladies of your patients*. It is an important advantage, arising from the constitution of our Dublin Schools, that the instruction which you there receive has all this tendency : and our teachers in the various departments, in their earlier years, look steadfastly forward to the time when, having attained the confidence of the public, they shall reap the due reward of their labours. They seek, meanwhile, to place their pupils in the path to competence and distinction. In this city we very properly reject the idea of undertaking the impossible task

of teaching pathology apart from its legitimate associates and exponents, the lectures on surgery and practice of physic, and from its natural relation to the study of symptoms and to treatment. We call *pathology* by its proper name. But I must recur to this hereafter.

The basis which we have just assigned as essential for the due study of disease suggests at once the important question, whether you should postpone your hospital attendance until you shall have acquired a knowledge of anatomy and physiology ? The comparatively short period which the arrangements of the medical bodies and the requirements of the public services assign for the education of the student, furnish a sufficient answer. But, even had the student at his disposal the longer term which ruled under the apprenticeship system, I should not, on abstract grounds, recommend any such postponement. For, although much that you see in hospital practice, in the absence of anatomical and physiological knowledge (as we shall shortly find), must be a mystery to you, still the intelligent student is early able to collect, through the avenue of his senses, and to appropriate by a sort of passive intuition, a variety of phenomena of the greatest moment in practice. He becomes acquainted with the physiognomy of disease ; he educates his eyes, and ears, and fingers. But, further, as respects a large number of the facts, and even a portion of the principles of our art, he finds that the senior student possesses no advantage over him ; because, simply, these facts stand not as deductions from the fundamental sciences, but have been the result of either

actual, or what it is now the fashion to call rational, empiricism. Thus, not all the resources of modern science have furnished the least clue to the indubitable fact, that bark will cure ague, or that mercury (I crave pardon for the doctrine, unpopular in this age of books)—that mercury is the proper remedy for true syphilis.

The junior pupil also can, and should, apply himself, where opportunity offers, to observe the natural history of disease—that is, its course and consecutive manifestations when uninfluenced by treatment. The student, therefore, from the very commencement, and throughout his whole career, should be engaged in *hospital observation*, and I should be slow to censure the tyro for allowing his curiosity to range discursively for a month or two amongst every variety of disease, before he binds down his mind to the strict examination of individual cases. Let him at this time also devote himself, as I have said, to the manipulations of surgery and to the training of his special senses.

Whilst thus engaged, he should, at other periods of the day, be studiously engaged in learning anatomy—not alone by lectures and by demonstrations (both alike useful and indispensable), but *with his own hands*—by painstaking and reiterated dissection of all the medical and surgical regions. I press this on you, because I know its value by experience, and because too many students of the present day, forgetting the legitimate use of plates and similar aids, vainly imagine that these will supply that know-

ledge of anatomy of which their own criminal neglect has left them really ignorant. The more resolutely and the earlier you betake yourselves to dissection, the sooner will you be enabled to understand and take an interest in the daily occurrences of hospital practice.

How can you, for a moment, expect to comprehend the phenomena of hernia—to know why, in one form of it, the operator divides the stricture inwards, in another, upwards—without a knowledge of the parts concerned ? and so of various other procedures. The diagnosis of the different swellings in the inguinal region, and the various forms of dislocation and fractures in the neighbourhood of joints, must be a mass of confusion, from which you can elicit but little profit, and the facts of which will soon fade from your memory, unless you have made them your own by diligent attendance in the dissecting room. Consider, lastly, your feelings, and the prospect for your reputation, should you, with mere book-knowledge in your heads, be called on to perform a critical operation at a moment's notice, and fail to effect it.

What may be termed your medical anatomy, is of no less moment, as in the diagnosis of intrathoracic aneurisms, in explanation of their progress and termination, in the discrimination of abdominal tumors, and even in assigning the natural limits of thoracic resonance, concerning which errors are daily made by those whose regional knowledge is inaccurate.

In no department of medical science is the maxim of HORACE more strictly true than in anatomy—

“ Segniūs irritant animos demissa per aurem,
 Quām quæ sunt oculis subjecta fidelibus, et quæ
 Ipse sibi tradit spectator.”

But further, you must remember that, virtually, anatomy and physiology are but one science ; for to teach them separately, except for convenience in the dissecting-room, is absurd and mischievous. What ! do you mean to learn the structure, figure, and relation of our organs, and yet remain content with ignorance of their functions ?

Gentlemen, do not consider that I travel beyond my legitimate function as a clinical teacher, in strongly insisting on the weighty import of physiological knowledge in the every-day transactions of medical and surgical life ; and I must venture to press it on you by brief examples, and to tell you that even unprofessional writers have commented on the want of due cultivation of this branch of knowledge : thus a late critic in the *Saturday Review* attributes, and with no little justice, the spread of various quackeries and modern “ pathies,” to the occasional ineptitude of practitioners for the discussion of medical subjects in the light of physiology. You cannot proceed a step in true medical or surgical observation in which such knowledge is not in requisition. How can you hope to comprehend the various phenomena of paralysis, whether of sensory or of motor nerves—the numerous reflex sympathies and their respective channels—the obstructed function of special nerves, whether dependent on centric or on external causes ? —the varying impediments to sensation, consciousness,

and volition in apoplexy ?—the influence of cerebral affections on the circulatory and respiratory organs—if unversed in the physiology of the nervous system? Can you conscientiously undertake the treatment of dyspepsia, whilst ignorant of the process of healthy digestion in all its parts? Can you do justice to a case of diabetes mellitus if unacquainted with the functions also of the liver, and with the remarkable and established power which that organ possesses of appropriating amyloid matter, as shown by the striking researches of CLAUDE BERNARD, ROUGET DE LISLE, and PAVY? or with the still more remarkable discovery of that substance, so closely allied to starch and sugar, in the placental cells, in muscular and pulmonary structure, and in horn.

And I would here for a moment digress in order to remark that these latter facts, together with other considerations, seem to me to give the *coup de grace* to that fashionable chemical theory so long cherished in the selection of foods, and in the construction of public dietaries, which denies to sugar, alcohol, and starch, a place in the list of true aliments, and restricts them to the rank of *heat producing* agents. This popular notion I will in passing observe, has been in my opinion most justly characterised by that profound philosopher Dr. PROUT, as “utterly at variance with the experience and with the common-sense of mankind;” one which future physiologists will look back on with wonder, that anything so absurd should have been *advanced*, much less *adopted* in this “enlightened age.” The above-named researches also

fully confirm the sagacious conjecture of PROUT (or rather his assertion on various valid grounds), that in its assimilating functions, the *liver is similar to vegetables*—that the liver is, in short, the original vegetative system on which, in animals, the animal system is, as it were, ingrafted.

Again, without physiological knowledge you can have no correct conceptions of the actions of medicines and of poisons—of their absorption, route, distribution, and elimination, together with the theory of vital counter-poisons, as shown in the antagonistic action of opium and belladonna, of nicotine and strychnia.*

The want of circumspection in the use of *chloroform*, and of acquaintance with its mode of action, is pregnant with danger. You must carefully study its progressive influence from its first local action on the windpipe, through the successive stages of intoxication and surgical sleep, to stertor, and (in the lower animals) by a further step—to death. You must note its influence on the muscular tissue of the heart, on respiration, tactile sensibility, consciousness, and reflex movements. All this will be necessary in order to acquaint you with the channels through which, in the event of sudden emergency under its use, you must promptly seek to recal the ebbing tide of life. How many occurrences depend for their safe

* A good illustration of the mutual counter-agency of opium and belladonna, has been lately published by my friend Dr. WHARTON, the justly-esteemed Surgeon to the Meath Hospital. These actions seem to depend on the opposite effects produced on the sympathetic system of nerves, viewed as the controller of the capillary circulation.

and efficient management on the class of information of which we now are speaking—drowning, strangulation, the shock of lightning, and exposure to the noxious gases. But I must refrain : and yet I pause a moment to deplore the loss of a noble and veteran labourer in this field—one who has departed full of years and honors, whose name will be venerated wherever science and humanity hold their sway—need I name SIR BENJAMIN BRODIE ? His sagacious and philosophic mind early perceived the profound importance of the study of which we speak, and throughout his whole career the great doctrines of the science are seen to pervade his surgical writings. Deeply and ever did he feel (what so many in our day seem to forget) that physiology is the legitimate introduction to pathology. His papers on various subjects of the science, published full fifty years ago, are models of cautious and acute research. Many of us, my colleagues, I doubt not, and myself, feel that we have lost a personal friend, and the profession a venerated chief—one who has held council with us in the wards of this hospital, and who bore an acknowledged respect for Irish Surgery and for Irish Surgeons.

A further and indispensable element in the prosecution of your clinical studies is Chemistry. Without a knowledge of this subject you will seek in vain to comprehend the local influence of various medicinal agents, and their reciprocal reactions as applied to the treatment of disease. You will require its assistance in the daily task of examining the state of the excretions, such as the urine, and so-forth, and in tracing

the modifications which the fluids undergo in a variety of affections of the urinary and digestive organs, the pathology of which are intimately connected with chemical transitions. In the complex investigations of legal medicine in its various branches, no superficial knowledge of the matter will support you with credit on public occasions. In fine, the relations of this science with pathology and physiology become every day more intimate and extended, so that if you desire thoroughly to learn your business *now*, and wish to avoid *hereafter* the risk—nay, the certainty—of being left behind in the race of professional competition by your better-informed brethren, you cannot safely neglect it. I would, however, caution you not to confound the legitimate facts and doctrines of the science, so essential to your progress and success, with the shallow, though plausible speculations of a host of the so-called chemical pathologists—good chemists, bad physiologists, and, consequently, still worse pathologists, or more truly, *not so at all*. To the want of a greater diffusion of practical and accurate chemical knowledge amongst men otherwise well informed in the ordinary departments of medicine, must we attribute as it appears to me, the singular facility—nay, servility, with which the theories of modern chemists on this head have found acceptance at the present day, and have been written down as established doctrines. From what I know of them, I feel compelled to think of many, that they fulfil the definition given by BLUMENBACH of the so-called, now well-nigh forgotten

science of Phrenology : "There is in it," says he, "much that is true, and much that is new; but that which is true is not new, and that which is new is not true." The facts alleged to be evidentiary are old and true—the superstructure is feeble, theoretic, and already totters to its fall ; it has, indeed, been well-nigh demolished by our sober and profound philosopher and physician, PROUT. Let us, then, thankfully accept the brilliant array of modern facts, but receive the generalizations, as it were provisionally, and with much reserve.

Such, gentlemen, are the means by which you should prepare yourselves to take advantage of the rich stores of knowledge furnished to you in institutions like that in which we are now assembled. Should you, on the one hand, neglect the materials here afforded you, or on the other, be unfitted to use them, the result will be one which you will have reason to deplore during the whole of your after-life. You may be expert anatomists, good physiologists, instructed in chemistry, and other departments, and practically unacquainted with disease, and hence incompetent to the great end of all your studies—the *treatment of the sick*.

Your grand aim, therefore, in respect of your future position as practitioners of the healing art should be, not merely the abstract study of the medical sciences, but their combined employment for the recognition and cure of the maladies that will be presented to your notice. In applying yourselves, then, to clinical study, armed with the weapons I have briefly dwelt on, your first duty becomes the strict observation and

faithful record of facts. To secure this object, a mere routine even though regular attendance at hospital will not suffice. All your faculties and senses must be keenly alive to what is passing around you. You must see with your own eyes, hear with your own ears, and feel with your own fingers—you must be constantly engaged in the medical education of your senses, and should accustom yourselves to the physiognomy, as it were, of disease. You must train your eyes to the reception of individual and collective impressions. You should be constantly listening with your stethoscopes and with your bare ears, to the chest—firstly of persons healthy quoad the heart and lungs, thus preparing yourselves for the due study of the morbid sounds in those organs, hereafter. In the examination of the pulse, the handling of tumors, abscesses, diseased joints, and so forth, you will have a most profitable exercise for your sense of touch in reference to future surgical practice. You should also familiarize yourselves with the ordinary condition of secretions, as shown in the state of the tongue, sputum, and urine. You will have thus, at a comparatively early period, laid in a store of facts which, as they present themselves again in your future inquiries, will be appreciated at a glance, and leave you more leisure for other and equally important subjects of attention. In my opinion, the occupation which is thus furnished at the commencement of your hospital studies, will prove much more useful than the attempt to take cases—I say the *attempt*, because you must learn to recognize the facts themselves, before

you can hope to set them forth in order, or to useful purpose.

Although you will thus secure a large amount of knowledge, it will require a far sterner course of discipline to render you skilled in the recognition and treatment of disease. In the pursuit of medicine, as of any other branch of natural knowledge, your reason, aided by all available means, must be exercised, not only in the examination and classification of the impressions of which I have just been speaking, but also in the search for and development of facts and principles not attainable through the intervention of the senses. You must not be content to receive only such impressions as force themselves upon you, or to acquire such facts and principles alone as your instructors in this institution make it their business to communicate—you must bethink you of your future responsibilities, and investigate disease for yourselves. However irksome the effort may prove at first, you must cultivate habits of continuous attention. Your powers of reflection and comparison must be exercised in what BACON happily terms the “cross-examination of nature.” The strict and accurate observation of facts is with some a natural talent, but with most persons, even of the higher order of minds, a painful exercise—one from which they are inclined to swerve with dislike, and to betake themselves to hasty generalizations founded on insufficient data. The first-named class of persons, although valuable contributors in the promotion of medical knowledge, have unfortunately too

often contented themselves with the mere collection of data, or been wanting, perhaps, in the aptitude for sorting their materials, and for generalizing from particulars—hence the facts which they have largely collected, lie in their own hands at least comparatively useless. Those, on the contrary, of a speculative turn of mind, more prone to reflection, are apt to indulge their mental bias, and without very narrowly scrutinizing the basis of their operations, press forward in search of general laws—hence, when existing facts prove stubborn, or insufficient, they are, perhaps, unconsciously warped or coloured, or aided by efforts of a lively imagination—“*quod volumus facile credimus.*” The theories of the chemical physiologists furnish good examples of this process. You, Gentlemen, should endeavour to avoid both these errors, and, in truth, it would not be easy to say which is the more mischievous. You should remember that nature presents us two subjects of contemplation—objects, and their mutual relations; in which the notions of observation and reflection are necessarily involved. In *observing*, the minutest particulars are not to be disregarded, as circumstances which *you* may deem trivial are frequently of the greatest moment—a statement which, did time permit, might be readily proved. Again, the circumstances which accompany any observed fact, are main features in its observation, at least until it has been ascertained by sufficient experience what circumstances are unconnected with it, and might, therefore, have been left unobserved, without sacrificing the fact. In observing, therefore,

and recording a fact altogether new, you ought not to omit any circumstance capable of being noted, lest some of the omitted circumstances should be essentially connected with the fact. With respect to your *record* of observations, it should not only be circumstantial but faithful ; that is, it should contain all that you did observe, and nothing else. Without any intention of falsifying, you may do so unperceived by yourselves, owing to a mixture of the views and language of erroneous theory with that of simple fact. In noting your facts, you should also, as far as possible, state them in the accepted nomenclature of the day, and of the department to which they refer. This will secure the advantage of rendering them more easily comparable with those of other observers, and with your own at other times and in other cases. In the description of the phenomena of disease, you should cultivate clearness and terseness of language, and the legitimate exercise of what I may term pictorial power. These are attributes which have given such charm to the works of many distinguished writers, of whom I may cite PERCIVAL POTT as a striking example.

All that I wish to say with regard to the *classification of facts* may be referred to the mode of taking cases—an exercise which, I have already said, I scarcely recommend to the very junior student. In case-taking, you will soon perceive that much abridgment of labour may be effected by a little attention to system ; it will not only help you in mentally digesting the results, but be also profitable when you are seeking to combine them with those of similar

documents. I should recommend you to commence your examination of any given case by learning all that can be gathered by an inspection of the patient—his physiognomy and complexion—the general bulk of his body, whether full or wasted—the condition of particular regions, whether swollen or attenuated—and of the surface, both as to secretion and temperature, and whether there be any eruption or sores, with their character ; lastly, the power of locomotion, whether the patient possess the free use of his limbs or no—all these are points on which you cannot run much risk of mistakes, and which afford important clues to internal conditions of the body. Thus, if the complexion be dusky, and the lips livid, you should look narrowly to the *heart and lungs* ; if the patient be *emaciated*, you look to the *organs of digestion and the lungs* ; if locomotion be hindered, you look to the *brain, spinal marrow, and special nerves*, and to the *articulations*. Having made this external examination, and felt the pulse, considered in its rythm, force, and frequency, and seen the tongue, you may proceed to inquire into the patient's sensations ; passing thence to an examination of the state of special organs and regions, in each of which you will seek to elicit the physical, sensible, and rational signs respectively.

The last matter which, in my opinion, should engage your attention (though commonly taken first) is the *history*. Your previous inquiries in the case will enable you to form a more reliable judgment of the patient's own account of himself—will give you an insight into his modes of thinking and their rela-

tion to his descriptions. You will learn what amount of discount, so to speak, you should take off his averments, and be able to check the irrelevancy and that undue garrulity which in the lower classes of this country are so great impediments to a correct estimate, especially of the exciting causes and progress of disease. In the earlier period of your attendance your attention should be directed more to the symptoms and progress of disease than to their treatment. You should seek, as it were, to trace what the late Mr. COLLES used to call their natural history. This, indeed is not so easy a matter, inasmuch as it is quite exceptional to witness the progress and termination of maladies, uninfluenced either by treatment or by other agencies. You should begin with those of the simplest forms, as a means of obtaining that initiatory knowledge, without which you will in vain endeavour to comprehend more difficult cases ; you should seek to apply the information you have gained in the dissecting and lecture rooms, and to ascertain in each instance what is the nature of the disease anatomically and physiologically considered, and what texture is its special seat. This will explain to you the symptoms, and simplify your further inquiries. The symptoms or signs of disease are not to be taken in the like sense with that in which the signs of external things are often regarded. The signs of external objects have no necessary connection with them ; but there is nothing that we call a symptom of disease that does not contain within itself much more than a mere sign : they are all the necessary results of de-

ranged function or of altered structure. Symptoms, however, stand in varying relations to the diseases to which they belong. In some cases they flow, as it were, out of the disease, so as to be separable from it : thus, you can, in idea at least, dissever cough and expectoration from the something beyond, namely, the tubercles which we view as the disease itself ; but the symptoms which denote an ague are the same which constitute the disease. We can have no idea of an intermittent apart from the rigor, heat and perspiration ; and so in other fevers. If you want in these cases, to separate the symptoms from the disease you must resort to a theory, and imagine an action prior to the actions which constitute the symptoms. I must further remark that what is in one case the essential disease, is in other cases a symptom, or secondary consequence merely, as in the case of dropsies and some haemorrhages. Lastly, I must caution you in estimating the intensity of the symptoms, to scrutinize the temperament of the patient ; this will save you from falling into grave mistakes in nervous and hysterical persons. On the contrary, you will find some individuals so naturally obtuse in feeling, that they often suffer under serious organic mischief without manifesting it strongly either by their symptoms or their statements.

The investigation of the phenomena of disease in the living must be aided by careful necroscopic inspection when the result is fatal. You must endeavour to trace the results of the malady, and, if possible, its nature, in the various organs and fluids after

death. That you should understand, however, the real scope and utility of *post mortem* examinations, and how far they subserve pathological inquiries, is a matter of much importance, inasmuch as morbid anatomy and pathology are too often confounded even now-a-days, owing to want of sufficient precision in the limitation of terms. This error is doubly mischievous, and alike to student and practitioner, by leading both to rest content with results which are supposed to contain the essence of the disease, and by diverting their attention from other and equally important channels of inquiry. To be pathologists you must study disease still more in the living than in the dead. In the matter even of local diseases, morbid anatomy is far from teaching us all that we require to know, whilst as far as we have yet learned, there are many diseases that have no special locality. What, for instance, shall we say of hysteria, gout, or fever. In local affections similar appearances are not uncommonly produced by diseases, which from observation of their origin, progress, and treatment in the living, are totally different: thus, a single joint affected with acute synovitis (such as some of you have lately seen in our wards), and a number of them implicated in acute rheumatism, may present the same morbid alterations, yet experience shows us that the means which cut short the one will fail in, or aggravate the other. In the intrinsic, or anatomical character of vascular injection of the mucous surfaces, more especially of the alimentary canal and of the conjunctiva, there is apparently nothing by which we

can distinguish conditions of the most opposite characters. Again, nothing is more common than to find collateral phenomena, or even minor results, confounded with the disease itself; thus ulceration in the lower part of the small intestine (the existence of which it is practically useful to know, as it may lead to perforation) has been magnified by the French physicians into the cause of typhoid fever. Now, this is no harmless error; for by leading to a corresponding line of practice, it has enabled *their* patients to die decently in accordance with the doctrines of so-called science, whilst the Irish practitioner, who is so *unpathological* as to act in defiance of the ulcerations, and treats the case by free use of wine and blistering, &c. very improperly cures his patient.

In numerous cases, the appearances which you will observe in the dead are produced by causes which have come into operation after death. These are the *pseudo-morbid* conditions due to the action of gravity, transudation, imbibition, and putrefaction, and which will require your careful attention, both in ordinary and medico-legal practice. These conditions abound in the stomach and intestines, but are also met elsewhere. You see them well delineated in the plates of CASPER'S "Gerichtlichen Medicin," which I now produce. You must ever bear in mind in your observations in the dead-room, that many of the diseased appearances which you witness, are but the consequences of earlier and more complex derangements of the blood and of the functions of nutrition, secretion, and respiration

This will be, perhaps, more especially observable in that class of affections which my colleague, Dr. BENSON, will fully explain to you. Thus, you will discover that plthisis, whilst it issues in the deposit of tubercle in a particular organ (and whilst the effects there produced demand your careful study) is a disease of defective sanguification, aëration, and nutrition, the precise nature of which awaits the discovery of more refined processes of research, and a more consecutive array of facts than are at present at our disposal. You will be confirmed in this view by observing in the surgical wards a similar deposit in the lymphatic glands, in the cancellous structure of the bones, and (as you have lately seen) in the cellular tissue of the lower limbs.

Morbid anatomy and pathology bear somewhat the same relation to each other as healthy anatomy and physiology. Morbid anatomy ministers much to pathology, but in strict and inseparable alliance with various other methods of investigation—with a diligent study of symptoms and progress, a careful attention to the effects of remedies, and of accompanying sanitary conditions, as respects food, surrounding atmosphere, and personal cleanliness, and with chemical and microscopic examination of the fluids and solids. These two latter modes of research, which have outlived the sneers of ignorance, you will find of much service both in ordinary and in medico-legal practice.

The propositions which I have already advanced sufficiently indicate the sources from whence, in general, your medical facts are to be derived, and the

basis of your operations in the study of disease. You collect that, on the whole, modern inquirers belong to what is termed the physiologico-pathological school. But I should deceive my younger hearers if I led them to believe that we can, in all cases, connect the morbid conditions which we observe with the doctrines and facts of the fundamental sciences. This problem, alas ! has not been fully achieved. We, therefore, must occasionally diverge into the path of "rational empiricism," which takes as its fundamental principle the mere observation of disease, and of the remedies which are most useful in its treatment. To this combined method of inquiry BACON appears to me to allude when he says : "They be the best chyrurgeons which, being learned, incline to the traditions of experience, or, being empirics, incline to the methods of learning."

Whatever be your starting-point, I desire to impress upon you that, as in the exact sciences, so in medicine, the only true progress you can expect to make is by the inductive method—that is, by employing a sufficient basis of particular facts to lead you upwards to general principles. I say, a sufficient basis ; for every age witnesses the destruction of some supposed general principles in medicine as in other branches of knowledge, reared either on too narrow a basis, or on a foundation of—what CULLEN calls—false facts, and which, that illustrious physician used to say, abound still more than false theories. You must, therefore, on the one hand, be diligent in the careful collection of facts ; and, on the other, in making them the sub-

jects of reflection and comparison. Such is the true path of progress.

You will derive great advantage by conversing with each other on the cases which you have observed and noted. New views always grow out of the collision of differently-constituted minds. Some persons are more, and others less gifted with the powers of reflection, and so of observation ; and when such differing intellects are brought in contact, new facts are elicited. Such of the senior students as take notes of the cases will soon be sensible that the advantage much more than compensates the trouble, and this they will find still more in after years. These documents will be invaluable for reference and comparison. Much of our unrecorded observations during the lapse of time are necessarily lost, not so our notes—“ *litera scripta manet.*”

In investigating disease by the bedside, the inquiries of the senior student should be directed chiefly, in the first instance, to the diagnosis, as being the basis of all rational treatment. The difficulties in this department, though often great, will, under exercise, daily diminish, and he will gradually acquire confidence in his researches.

As regards your reading, I cannot recommend you to enter at once on a long and systematic course. You must be somewhat of eclectics. Books, at least in the first instance, should be had recourse to, chiefly for reference, when you need information on a particular case (and you should know that the newest are not of necessity the best) ; you will do well to be provided with standard works on pathology, medicine,

and surgery. But let me beg of you not to neglect the productions of some of the great master minds of the last and of the earlier part of the present century; for, although the works of modern writers are more or less imbued with their principles, yet you will profit deeply by going to the fountain-head. Amongst these, and standing on a lofty eminence, is the immortal work of JOHN HUNTER, on the blood and inflammation. As you gain experience in surgical practice, you will daily recognise, in this profound treatise, the precious landmarks which he has left for our guidance and instruction. For myself, brought up in his principles I view him with profound veneration. All honor to those generous men who lately, at a fitting time, transferred his hallowed ashes to that place where they now mingle with those of statesmen and patriots, and others of the illustrious dead !

Before leaving this subject of books, I must guard you against the error of imagining, as these are apt to teach you, that each case you meet is but a specimen of a particular disease. This is not the fault of the books or lecturers, as they must of necessity deal with their subjects in this provisional way.

Having fairly embarked in hospital pursuits, the junior student cannot too early know, that to whatever department of the profession circumstances may hereafter lead him to devote himself in practice, he cannot hope to prove a successful or a conscientious practitioner without a competent acquaintance with all the branches of medical science. The Royal College of Surgeons of Ireland has long since acted on

this principle, and has thus been so far in advance of the other medical corporations. It has long been a school of medicine and surgery. The surgical candidate is carefully examined in both these sciences, irrespectively of his future intentions in practice. No man should be permitted to practise any branch of his profession who has not enjoyed opportunities of studying the whole. There is nothing to prevent him in after life devoting himself to the special department in which he thinks he is likely to excel. One man has more pleasure in manipulations, and another in the exercise of the faculties of reflection and observation. Time and opportunity will develop his particular preference. You cannot, however, be too fully convinced that no practitioner can be truly skilful in any one branch of pathology who has not studied the rest; in a word, there is no radical distinction between medical and surgical diseases: both are ruled by the same laws, and the conventional line of demarcation between them is uncertain and ill-defined. The symptoms, progress, and results of intestinal strangulation are, in the main, alike, whether you meet them in the medical wards, under the physician's care, or under that of the surgeon in a strangulated hernia; and so of serofulvous deposits, and the rest. I make these remarks in order to impress on the junior student the necessity of studying medical, with as much zeal and industry as surgical cases. That the surgical clinique, in most hospitals, is more fully attended than the medical, is easily explained. Surgical diseases appeal more

directly to the senses ; their phenomena are more definite, and their treatment more striking and immediate in its results. Surgical diseases more immediately connect themselves with his anatomical knowledge, and furnish occupation for his hands ; whilst the fascination of operative procedures, with their magical results, rivet the attention of the beholder.

But what shall we say of *midwifery*? If you intend to engage in country practice, you do not require to be told that it will be then an indispensable acquirement. But, perhaps, you will reply—I shall try my fortune in town as a pure physician, and therefore I surely do not require to study it. Not so. Many diseases are influenced in their progress and treatment by the co-existent state of the uterus and its appendages. As surgeons or physicians, you may be called to consult on diseases of the parturient state ; and it is the business of the teacher of midwifery to instruct you in the diseases of women and children, with which, I presume, you would not willingly confess yourselves to be unacquainted.

The following incident will also show you that it is possible to get unintentionally entangled in an obstetric transaction after a somewhat inglorious fashion.

A late distinguished Professor in a northern College (and who used to relate the matter with a mixture of shame and humour) had gone to his native village with his medical honors just new and thick upon him. The village doctor having a difficult case of midwifery, gladly availed himself of the presence of the visitor, who, unfortunately, had never seen a case

of midwifery in his life ; he was, however, loath to acknowledge his ignorance, and thus mar his budding reputation. Putting a few questions to his confrere, he learned that the case was one in which the child's head was enlarged by water on the brain, and which nothing short of an operation could usher into the world. The Professor made an examination, without discovering anything which he could comprehend, and prudently agreeing with his brother, pronounced "all right." So at it they went. An ugly instrument called a crotchet was produced, for the purpose of getting out the large-headed child, dead or alive. After many fruitless efforts, kind nature came to the rescue, and expelled the child, which had really presented by the breech, and with that region not the better of the *physical* crotchet, employed in consequence of the *mental* one which had previously occupied the head of the luckless village doctor. The Professor, from that day forward, abjured obstetric medicine.

You must, therefore, at all hazards, study midwifery. Besides, in whatever department you practise, you cannot escape being called on to depose in cases of child-murder, criminal abortion, violation, and in questions of the duration of pregnancy, in its bearings on legitimacy. For the solution of such questions, an accurate knowledge of physiological and practical midwifery is indispensable.

Such, gentlemen, are the general, though very imperfect reflections relating to the modes and instruments of clinical study which I have deemed it right to offer you.

As regards the manner and order in which the medical officers propose to discharge their respective duties, this is in some degree expounded in the hospital prospectus, which also informs you of the various hours of visit. At each bedside you will be furnished with a brief but practical exposition of the leading conditions which should engage your attention ; the visible phenomena will speak for themselves to attentive eyes. The symptoms and progress of the disease will be explained—more fully, of course, at the clinical lecture in the theatre, where the general pathological relations of the malady will be commented on. You will have ample opportunity of observing our treatment and manipulations in medical and surgical cases, and of learning our reasons for adopting them. The grounds of diagnosis will also be laid before you.

In all fatal cases, a careful inspection will be made, and the results observed will be demonstrated to you in our spacious mortuary, by the medical officer under whose care the patient may happen to have been.

We shall afford you, also, information with regard to the microscopic conditions of diseased structures, and of urinary deposits, with practical comments on the chemical characters of the latter, and of morbid urine. Our Physician will give you the fullest and latest details in auscultation and percussion, and their uses in the diagnosis of diseases of the heart, lungs and abdomen, and communicate to you the fruits of his observations in medical diseases generally.

And here I would interpose a still further word on the paramount necessity of attention on your part to

medical cases, which, it may be safely stated, will form the larger portion of your future practice, by whatever denomination you call yourselves ; and let me beg of you to remember, that those affections which you might be disposed at present to pass by as trivial or uninteresting, are those on which you will be first consulted. And this is true in surgery as well as medicine. The striking events of hospital practice generally attract an undue amount of attention at the hands of medical students, as too many of them find afterwards to their cost. Is there an amputation, a lithotomy, or excision of the jaw ? the students flock, and very properly, to witness the proceeding : how many watch with sufficient care its after treatment, progress, and result ? I fear but the minority. How many have learned as carefully as they should to bandage an ulcerated leg, or adjust a fracture—nay, even dexterously to open an abscess ? How many have observed, as patiently as they should, cases of dropsy or bronchitis, or can distinguish clearly between one cutaneous eruption and another ? It must be confessed that medicine has its dramatic interest as well as surgery, and pupils resort to see *fine* cases of pneumonia or aortic aneurism, who would not condescend to a dyspepsia, or a hob-nailed liver. You will find that much of your success hereafter will depend on the facility with which you are able to recognize and treat the minor ailments ; and many young men, otherwise promising and well informed, by such neglect have irreparably damaged their future prospects, of which I could give

you numerous examples. Do not, therefore, imagine for a moment, that by wandering about the wards of an hospital, by listening to lectures, and by taking notes—and by these *modes alone*—you are acquiring a true knowledge of your business. No, you may be full of information acquired by aid of memory, and be even ready to pass your examination with credit, and yet for practical purposes unacquainted with your profession. You may be quite *au fait* as regards the descriptions of disease, necessarily simplified as it is in books, and yet unable to recognize it, when called to the bed-side of the patient.

A mere passive reception, then, of the teachings of others, however gifted, cannot for a moment supply the place of that personal observation—that habit of thinking and reasoning for yourselves, which is in no profession more important than in our own. Depend upon it, the best part of everyone's knowledge is that *which he has acquired for himself*, and which he can but in a limited degree communicate to others. Labour, therefore, to make knowledge *your own*, by *your own exertions*. Whilst, therefore, it shall be our earnest effort to afford you practical information by brief disquisitions on the cases, we are far indeed from desiring to place your minds in that neutral and inactive state, in which your memory is almost the only faculty exercised. We wish in our teachings to lead you by vigorous mental efforts to teach yourselves. We desire to instruct you; but not as a late eminent hospital Surgeon of our city used quaintly to express it—to *spoonfeed* you.

As respects your teachers, I shall not enlarge much

on that point. In the medical wards, you will enjoy the great advantage of Dr. BENSON's guidance ; and I trust that you will avail yourselves diligently of the results of his profound and varied experience of disease, and of that conscientious zeal in the communication of knowledge, which keeps pace with his kindly interest in your success.

Those gentlemen with whom I have the honor to serve in the surgical clinique require no eulogy from me ; their professional reputation, their character and standing, and their writings upon so many important subjects of our art and science, are well known, not in this country only, but throughout Great Britain. If you perform *your* part, you will, on completion of the Session, have profited deeply by their teachings and by their example. The abundant surgical materials at their disposal, both of accident and disease, will powerfully second their exertions on your behalf.

In the City of Dublin Hospital the student enjoys the great advantages to be derived from a study of diseases of the eye, and of the diseases of women and children. The investigation of ophthalmic diseases should be a matter of the highest interest. In that wondrous mechanism, which, of all our organs, proclaims, perhaps most loudly, the unfathomable skill of the divine Creator, we see visibly displayed the march of those morbid processes which the opacity of other parts conceals from our view. The extraordinary variety and peculiarity of structure which it contains, constitutes it, when diseased, a sort of microcosm of pathology. In observing its maladies, to which special beds are

devoted in the hospital, and in attending the lectures on its anatomy and surgery at the College of Surgeons and in this building, you will enjoy the privilege of being guided in your studies by one who is known to science and the world as the discoverer of a most delicate texture within the eyeball, which late microscopic researches have further revealed in all its beauty. Dr. JACOB's profound and philosophic grasp of his subject, and his great operative dexterity, will speak to your attention more forcibly than anything that I can say concerning them.

In our institution you will study the diseases of women to the greatest advantage, under a Physician (Dr. BEATTY) of whom, taken in all his relations, Dublin may well be proud. How often have not many of you with myself been instructed and gratified by his brilliant manœuvres in the rectification of that most distressing infirmity which results from unduly protracted pressure of the child's head during labour? Lose not the precious opportunities which he affords you of acquiring that practical information which will prove invaluable hereafter.

For myself, as one of the Surgical corps, I may be permitted to say, that I have always felt an earnest desire to forward the diligent pupil in his studies, and to stimulate the less energetic to progress. I trust, if life and health be spared me, to be ever at my post, and always at your service.

Suffer me, ere we part, to offer you, in a kindly spirit, a few words of warning and advice. And, firstly, I would, in the discharge of an imperative duty, impress on you the solemn obligation under

which you lie, to be diligent in your attendance here. If you wish to be anatomists, you can only learn the science practically in the dissecting-room—botany in the field—chemistry in the laboratory—disease only in the hospital—I repeat it, *only in the hospital*. There, and there alone, can you acquire readiness and tact in discovering, and self-reliance in treating it. There also the natural history, progress, and treatment, together with the influence of sanitary measures and medical discipline on disease, can only be studied with precision. There you acquire that inestimable knowledge of the recuperative powers of nature, that meek, beneficent, and long-suffering agent, which is too often rashly put aside by the doings of conservative surgery—conservative, sometimes so called, by a singular perversion of language. In hospital you will witness those beautiful though gradual transitions by which organic lesions of joints and inner organs are ultimately removed, and health restored. You will thus learn faith in expectant medicine—you will hence also discern the source of that rash reliance on various quackeries which characterizes, more particularly the so-called better classes of society. You will learn in many cases (take a case of measles), to content yourself under the friendly shelter of a little nitre to await the cure which nature will effect. Should a storm arise in the lungs or elsewhere, you meet it with decision—when over, you relapse into inaction. There is a time for all things, says the preacher—a time for energy and a time for repose; and the services of

the judicious practitioner are duly rendered in determining these respectively, and in preventing unnecessary interference.

Although in hospital, things are more under our control than in private practice, I should still mislead you if I led you to suppose that even there you will be always able to trace with the desired accuracy the relations of cause and effect, and the precise influence of treatment, and of the positive and negative effects of remedies, all of which are complicated by a host of concurrent influences. "When the optician arranges his lens in a new order, his knowledge of optics enables him to predict the result ; but in the study of the various and complex phenomena which are the subject of pathologic study, we are, even now, far distant from absolute precision ; it is only by a long and varied series of collateral observations, together with the exercise of the greatest caution, and even of wholesome scepticism, that the truth is arrived at." In the great majority, also, of the remedies which we employ, the *modus-operandi* could never have been determined *a priori* ; thus, nothing short of actual experience could have informed us that quinine cures ague, or that opium produces sleep.

How incumbent on you, therefore, to lose no possible opportunity of acquiring a knowledge of everything that can be obtained by hospital study. The phenomena of disease will not wait for you ; and the student who has returned to hospital after some days idleness, will find that the links of his chain of observation are broken, and that he has acquired but an

unsatisfactory and disjointed notion of the case. Such desultory attention will prove a source of serious difficulty and embarrassment hereafter in his diagnosis. We earnestly desire that those who are educated in this institution should go into the world as useful and respectable members of an independent and honorable profession. We desire that you should be successful, and that you should deserve to be so. To this end, the first requisite is *earnestness*; if you possess this, you have nothing to fear; it will overcome all difficulties; if not—you have mistaken your vocation. I know nothing more touching than the spectacle of a youth, conscious thus early of his future responsibilities, setting himself resolutely to the task before him, armed with self-respect and self-reliance, and winning the esteem alike of his teachers and his fellow-students. Young men! be therefore up and doing; be not dismayed at the idea of future competition. Remember the saying of SWIFT, “There never was so great a crowd that there was not room—over their heads.”

You are, no doubt, exposed to many dangers and temptations—keep, then, steadily in view the intrinsic weight and gravity of your destination, and act accordingly. Hear the words of a most experienced and sagacious observer:*

“Many eyes are upon you; say not to yourselves, ‘who will be at the trouble to watch the progress of a medical student?’ ‘who will know hereafter whether I have been diligent or idle?’ Do not

* Address to the Students of St. George's Hospital, by Sir B. BRODIE.

for a moment fall into so great a mistake. Very early in you career it is observed whether you are striving to obtain a knowledge of your profession, honorable in your dealings, conducting yourselves like gentlemen, or whether you are frivolous and idle, offensive in your manners, coarse and careless in your general demeanour, wasting the precious hours which should be devoted to study in discreditable pursuits. All these things are noted to your final advantage or the contrary, and ultimately you will learn, that it is not on accidental circumstances, but on the character which you have made as students, that your success as practitioners, and as men engaged in the business of the world, will mainly depend. The knowledge, moreover, which you will collect as students is, you should never forget, to be the foundation of that which you are to derive from years of after experience. You may, no doubt, on passing your examinations, set out with a store of knowledge very scanty in proportion to its future amount, but still, you will be on the road to larger supplies. If you have well employed your years of studentship, you will have the advantage of principles which have been established by the labour of preceding generations, and this will render your subsequent efforts comparatively easy ; but he who has been idle and careless in his earlier career, will find when too late, that no present energy will enable him to reach the level of those who were his more diligent associates. He will then also feel deeply the want of those habits of attention, observation, and reflection, which, as I

have already told you, constitute the most important training of the intellectual faculties. Remember, also, that being in the present stage of your journey through life released in a great degree from responsibility to others, your responsibility to yourselves is much increased ; your future fortunes are in your own hands, and you may make or mar them as you please. Such of you as now labour hard in the acquisition of knowledge, will feel hereafter, that in practising their art for their own advantage, they are, at the same time, making themselves useful to their fellow-creatures. When they obtain credit, they will feel that it is not undeserved, and a just self-confidence will support them even in their failures. For those who take an opposite course, nothing awaits them but a long series of mortifications and disappointments ; with them life will be a succession of tricks and expedients, and if, by accident, they should become elevated into situations for which they have not been qualified by previous study, they will find that to them this is no good fortune, and the constant anxiety to satisfy others, and to keep themselves from falling, will destroy the comfort of their existence."

The observations I have just quoted, are intended as friendly warnings to those who are just entering the profession, and to them as young men only, irrespectively of their special calling. But whilst I mention these matters, with the view of inculcating the necessity of the utmost care and circumspection in the regulation of your conduct, and the avoidance of everything that can give a colourable pretext to your

disadvantage in the sight of others, I will not insult the understanding of my auditors by more than glancing at the preposterous notion, that there is anything in the nature of medical studies which tends to deteriorate the principles of the young, or that the medical student is the hopeless scapegrace which some delight to paint him. (Some, indeed, irreverently will have it, that the divinity student in this respect out-vies him.) These are fallacious notions. Without the slightest intention of palliating the errors of youth, yet knowing that, too often, the vices and the turbulence of the few, in every walk of life, are visited on the many, I can bear my most willing testimony to the general good conduct of the pupils with whom during many years I have been brought in contact both in this hospital and elsewhere. Their endowments, both moral and intellectual, will bear favourable comparison with those of any other calling. The practitioners of Ireland stand pre-eminent as men of solid attainments and integrity. How comes it then, it has well been asked, that these excellent and honorable men—"consulted in every difficulty, entrusted with every secret, welcomed at every board, and cherished in every family"—were once, and ere they clutched their licence, the children of Belial that we hear of? Surely the transforming influence of a two hours' examination must be something marvellous. Let us not, then, in judging of any class of men precipitately adopt the maxim "*ex uno disce omnes.*"

It has been ever a matter of pride and gratification to the medical officers of this institution to witness

the progress and good conduct of our pupils. Large numbers of our former alumni now occupy responsible positions, and enjoy public confidence throughout the country. They have also earned high distinction during the late wars both in the naval and military service. In this circumstance we recognise the fact that our labours have not been in vain.

Not long hence our senior students will have become their own masters, or rather, I should say, the servants of the public. You, Gentlemen, will have obtained your licence, but, as our senior medical officer ably and graphically put it in his inaugural discourse at the School of Surgery a few days since—your great examination is yet to come. You will have undergone what, in academic language, may be termed “the little go”—the great one you must submit to in the presence of your future patients and their friends. See that you are prepared to pass ; if rejected, your fate is sealed.

You may, doubtless, mean well throughout your professional life ; and you may, and most surely ought, to have benevolence towards your fellows. But no good can be effected by mere benevolence. Science is the only power. Benevolence may supply the motive for the acquisition of knowledge ; but here, as respects your duties in life, its function ends. A well-meaning surgeon may attend, in the most painstaking way, an obscure injury of the shoulder, and leave the dislocation unreduced, simply because his knowledge was not equal to the necessities of the case. Better the most cold-hearted, if he be skilful, than the most

benevolent, if his heart be not adequately supported by his head.

Deviating somewhat from the text, I will, therefore, tell you, as regards your prospects and your duties — “Knowledge is the principal thing ; therefore get knowledge.”

As regards the moral aspects of your calling, I will merely say—and it is enough—see, as you pass through life, that your relations with your professional brethren are ruled by strict integrity and honor. I know not any walk in life in which the maxim, “Honesty is the best policy,” tells more strongly than in our own.

But whatever may be your success hereafter, in solving the great problem of life, you must not expect too much from this world. So-called success, severed from happiness, is worthless tinsel. Happiness comes chiefly from within ; and yet—strange paradox—from without, or, rather, from above. In this world there is nothing so cheering as usefulness, and usefulness implies discharge of duty. But duties, to be really discharged, must be so in a proper spirit, not that which would vainly wield them as the ladder by which we seek to scale the celestial ramparts, but as the spontaneous tribute of a heart cheered, and yet chastened, by divine and atoning mercy—as the free-will offering to Him who “daily loadeth us with His benefits.”

See that your first steps in life are taken in this persuasion, and may you and I be upheld therein.

As you advance in life you will often be saddened—

and who is not?—by its trials and vicissitudes—by deaths and troubles. One or another of you may sometimes say, with our national poet—

“ When I remember all
 The friends so linked together,
 I've seen around me fall,
 Like leaves in wintry weather,
 I feel like one who treads alone
 Some banquet-hall, deserted,
 Whose lights are fled and garlands dead,
 And all but he departed.”

What, then, can cheer you? Faith, alone, in the Divine attributes and in the Divine record. At present, as Bishop BUTLER tells us in his “Analogy,” we know not the whole of the case; but this we know, on unerring authority, that “the whole creation, which groaneth and travaileth in pain together until now,” shall hereafter awake to a glorious liberty. Be occupied, then, in diligently discharging the duties which, in the order of Providence, have been assigned you. Banish sad feelings by thinking of the time when there shall be no more partings, no more pain, no more death; and when the tree of life, yielding its leaves for the healing of the nations, shall render the functions of our art superfluous.

